

PLUMBING NOTES

CODE (IRC) AS ADOPTED BY THE CITY OF TUCSON.

2. DOMESTIC HOT AND COLD WATER PIPING AS PER 2018 IRC.

ABOVE GRADE: PROVIDE TYPE "M" COPPER WITH 50/50 SOLDERED WROUGHT COPPER FITTINGS.

UNDER SLAB: PROVIDE TYPE "L" HARD DRAWN COPPER WITH 95/5 SOLDERED WROUGHT COPPER FITTINGS. SHEATH IN PLASTIC PER IRC.

3. ABS (SCHEDULE 40) WASTE LINES MAY BE USED PROVIDED INSTALLATION AND SEALS CONFORM TO LOCAL STANDARDS. TERMINATE WITH A TWO-WAY GRADE CLEAN-OUT (GCO) AND SWITCH TO APPROVED PIPE PRIOR TO LEAVING THE SITE AS REQUIRED FOR SEWER CONNECTION.

- 4. PROVIDE 1/4" PER FOOT SLOPE FOR WASTE LINES.
- 5. PROVIDE CLEANOUTS PER IRC 707.0 AND LOCAL CODES.
- 6. PLUMBING CONTRACTOR (PC) SHALL SECURE ANY AND ALL PERMITS AND INSPECTIONS INCIDENTAL TO THE WORK, AND SHALL ADHERE TO ANY AND ALL CODES HAVING JURISDICTION.
- 7. PC SHALL DO ALL EXCAVATION AND BACK FILL INCIDENTAL TO THE WORK.
- 8. PC SHALL BE RESPONSIBLE FOR FINAL WASTE, GAS, AND WATER HOOKUPS ON ALL EQUIPMENT REQUIRING SUCH.
- 9. THERE SHALL BE NO COPPER FITTINGS BELOW GRADE.

IO. PC SHALL GUARANTEE THE MATERIALS AND WORKMANSHIP FOR ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE BY THE OWNER.

II. FIXTURES TO COMPLY WITH IRC CHAPTER 15 AND LOCAL AMENDMENTS. WATER CLOSETS 1.6 GALLONS PER FLUSH MAX. SINKS AND SHOWER HEAD TO BE 3 GALLONS PER MINUTE MAX.

12. PROVIDE AIR HAMMERS AT THE ENDS OF PLUMBING RUNS.

- 1. ALL CONSTRUCTION SHALL CONFORM TO THE 2018 INTERNATIONAL RESIDENTIAL 13. PROVIDE ANTI-SIPHON DEVICE AT EACH HOSE BIBB PER IRC 2018 SEC 2902.4.3, AND VACUUM BREAKERS PER IRC 2018 SEC 2902.4.3.
 - 14. PROVIDE 3/4" DIAMETER CU P\$TRV LINE FROM THE WATER HEATER TO EXTERNAL WALL PER IRC 2018 SEC P2804.
 - 15. SHOWER AND TUB COMBINATIONS SHALL BE PROVIDED WITH INDIVIDUAL CONTROL VALVES OF THE PRESSURE BALANCE OR THERMOSTATIC MIXING VALVE TYPE PER 2018 IRC 410.7.
 - 16. PROVIDE DISHWASHER CONNECTION PER IRC 804.4, AND WASHER CONNECTION PER IRC 804.1.
 - 17. PROVIDE SHUTOFF VALVE AND UNION AT THE DCW CONNECTION TO THE WH. PROVIDE UNION AT THE DHW CONNECTION.
 - 18. GAS PIPING USE BLACK IRON, SHEATH PER IRC.
 - 19. GAS WH INSTALLATION PER IRC 507, 508, AND 509.
 - 20. PROVIDE BRASS SHUTOFF VALVES AND PRESSURE REGULATORS AS REQUIRED AT EACH GAS APPLIANCE CONNECTION.
 - 21. DRAINAGE PIPING FOR MAIN SEWER TO HAVE MINIMUM SLOPE OF 1/4" PER FOOT AS PER 2018 IRC SEC. 708.0.
 - 22. THERMAL EXPANSION TANK TO BE INSTALLED AS PER 2018 IRC

23. BATHTUB & SHOWER ENCLOSURES BE FINISHED PER P27 I O W/ CERAMIC TILE, OR A LISTED ENCLOSURE, TO A HEIGHT OF 72" ABOVE THE DRAIN PER R307.2

- 24. WATER HEATERS WITH VERTICAL PIPE RISERS SHALL HAVE A HEAT TRAP ON BOTH THE INLET OF THE WATER HEATER, UNLESS THE WATER HEATER HAS AN INTEGRAL HEAT TRAP OR IS PART OF A CIRCULATING SYSTEM
- 25. HOT WATER SUPPLY LINES SHALL HAVE R-3 INSULATION PER IRC 2018 SEC N1103.5.3.
- 26. PLUMBING VENTS SHALL BE A MINIMUM OF 10 FEET FROM OR 3 FEET ABOVE FROM ALL AIR INTAKES AS PER IRC 2018 SECTION P3103.

PLUMBING LEGEND								
SYMBOL	ABBREVIATION	EXPLANATION						
	WASTE	WASTE						
	DCW	DOMESTIC COLD WATER						
	DHW	DOMESTIC HOT WATER						
GAS—GAS—	G	GAS						
	P\$TRV DRAIN	PRESSURE & TEMP RELIEF VALVE DRAIN						
0	RV. OV. CV.	RE. OVER OR CIRCUIT VENT						
0	VTR	VENT THROUGH ROOF						
	НВ	HOSE BIBB						
	50V	SHUT OFF VALVE						
$-\phi$	GCO	GRADE CLEAN OUT						
\triangle	P\$TRV	PRESSURE \$ TEMP RELIEF VALVE						

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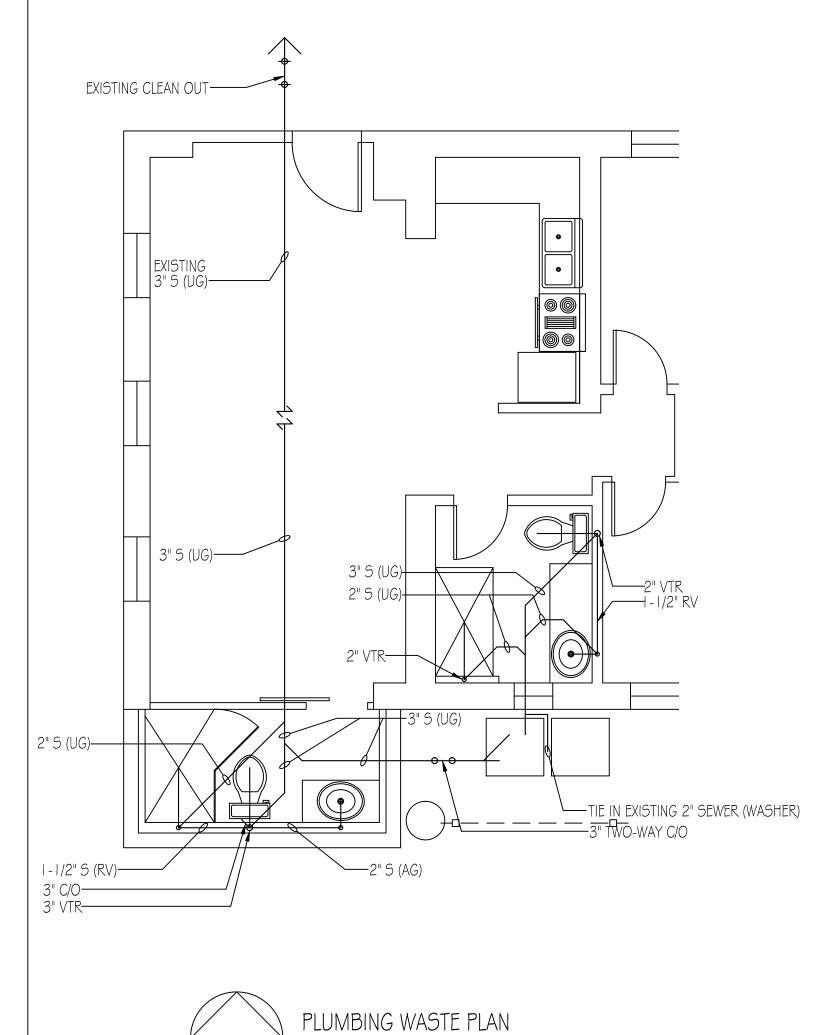
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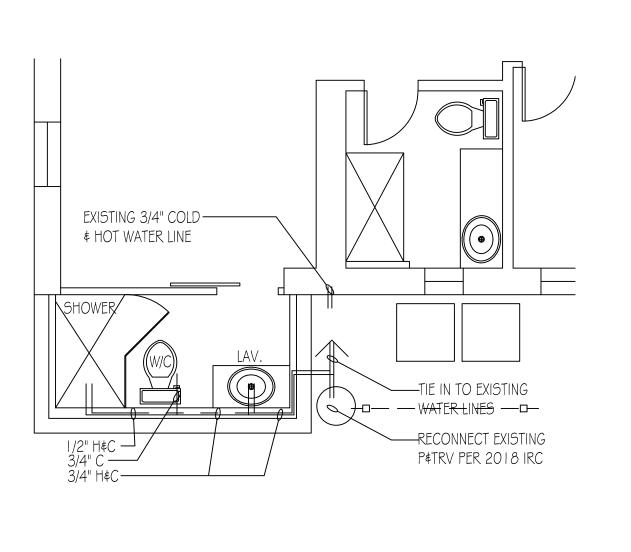
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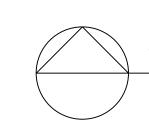
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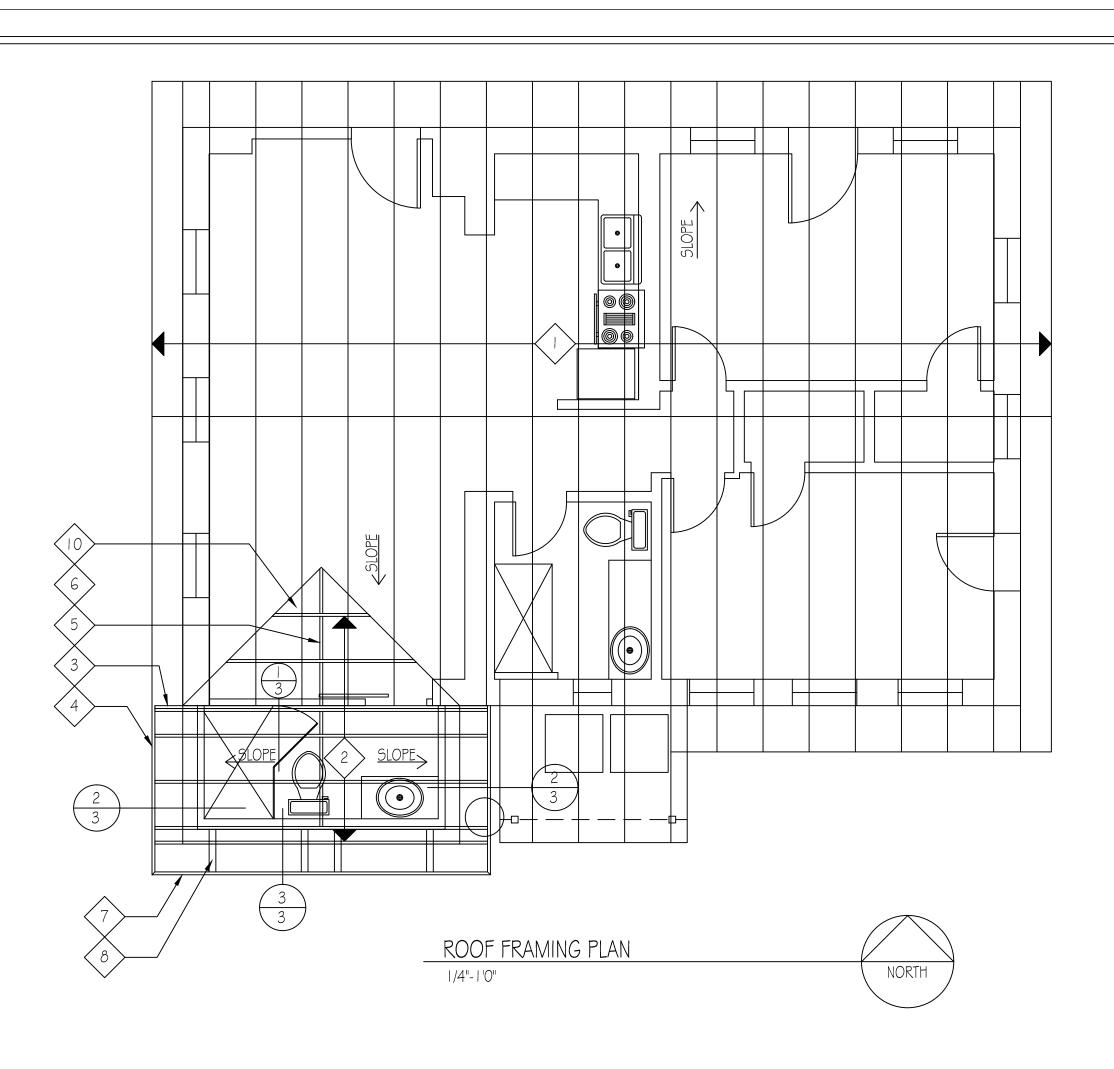
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PLUMBING WATER PLAN 1/4" = 1'-0"



FRAMING PLAN NOTES

. ALL LUMBER TO BE GRADED AND STAMPED.

2. MATERIALS: STUDS D.F. #2 OR BETTER BEAMS D.F. #1 OR BETTER JOISTS D.F.#2 OR BETTER

SHEATHING I / 2" CDX/OSB (CCX @ OVERHANGS), PLYWOOD STRUCTURAL GRADE I, DFPA GRADE STAMPED.

3. ALL FRAMING MEMBERS SHALL NOT EXCEED 19% MOISTURE CONTENT 4. ALL SOLE PLATES TO BE PRESSURE TREATED.

5. USE PRE-MANUFACTURED TRUSSES FOR THE FRAMING MEMBERS AS SHOWN. THE GENERAL CONTRACTOR SHALL SUBMIT TRUSS DRAWINGS, ANCHORING AND CONNECTIONS, BLOCKING AND STRESS DIAGRAMS, STAMPED AND SIGNED BY AN ARIZONA REGISTERED

PROFESSIONAL ENGINEER FOR APPROVAL BY THE PLAN CHECK/BUILDING INSPECTION AGENCY PRIOR TO ERECTION.

6. PROVIDE NON-COMBUSTIBLE FLASHING THROUGHOUT.

INTERNATIONAL RESIDENTIAL BUILDING CODE.

RAFTERS AND FULL BEARING AT THE EDGES.

PLATE, EXTERIOR STUD WALLS ONLY.

7. ALL FRAMING, NAILING AND CONNECTIONS PER IRC 2018. 8. NAILING SHALL BE IN ACCORDANCE WITH NAILING SCHEDULE TABLE 25P,

9. PLYWOOD 8d @ 6" O.C. AT EDGES, AND 12" O.C. AT INTERMEDIATE

SUPPORTS. USE BOX WIRE NAILS AND PLYWOOD CLIPS SPACED AT 24" O.C. 10. ALL SHEATHING SHALL BE PROVIDED WITH BEARING AT CENTERLINE OF

I. METAL FRAMING DEVICES SHALL BE MANUFACTURED BY SIMPSON COMPANY OR EQUAL.

I 2. PROVIDE TECO CLIPS OR SIMPSON H3'S OR EQUAL CONNECTORS AT EVERY OTHER STUD AT THE BOTTOM PLATE AND THE SAME AT THE TOP

13. BOLT HOLES SHALL BE 1/16" OVERSIZE. THREADS SHALL NOT BEAR ON WOOD OR STEEL. ALL BOLTS SHALL BE RE-TIGHTENED PRIOR TO ENCLOSING. ALL BOLTS SHALL BE ASTM A307.

14. ALL EXPOSED LUMBER SHALL BE ROUGH SAWN.

15. PROVIDE BRACED WALL PER IRC 2018. PROVIDE ANCHORAGE TO FOUNDATION PER IRC 2018. PROVIDE ATTACHMENT TO SILL AND TOP PLATES PER IRC 2018.

DEAD LOAD = 15 LBS LIVE LOAD = 20 LBS

FRAMING KEY NOTES

1 > EXISTING ROOF 2 > PRE-FAB TRUSSES @24 O.C. 3 SIRDER TRUSS

4 > 2X FASCIA 5 > 2X RIDGE

6 COORDINATE WITH TRUSS MANUFACTURE TO MATCH EXISTING SLOPE

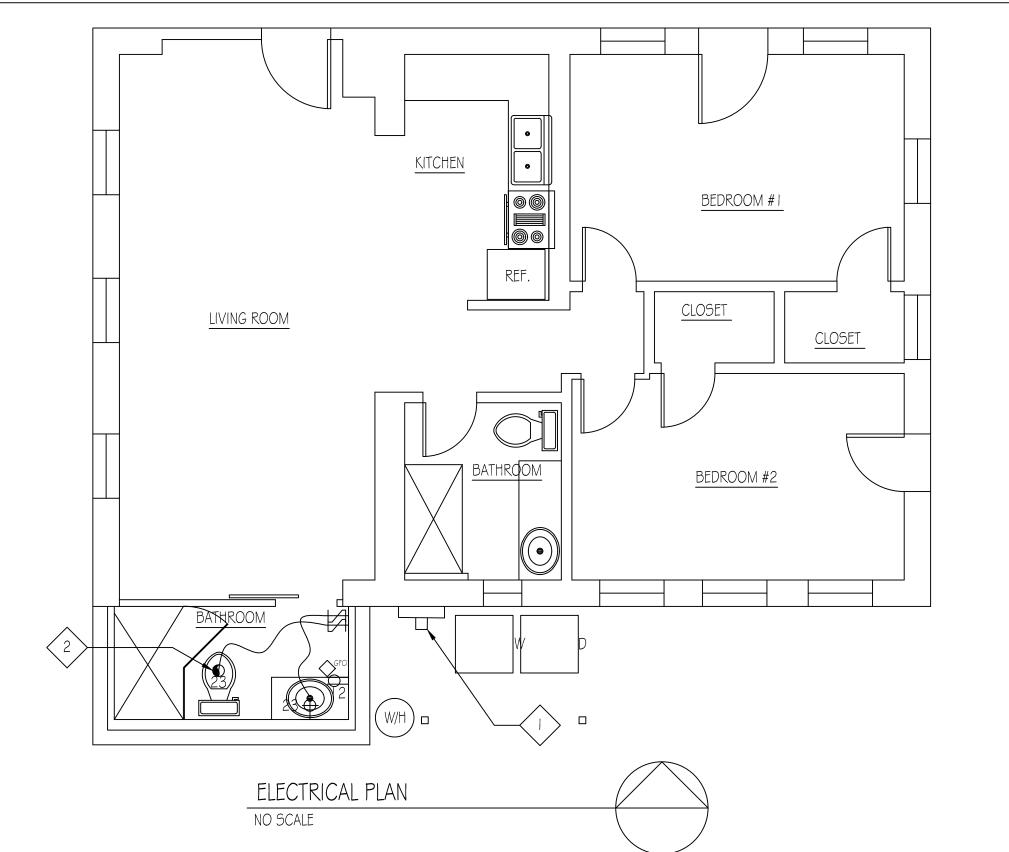
> 2X FLY RAFTER

8 > 2X OUT RIGGERS @ 48" O.C. TURNED FLAT

10 OVER FRAME PRE-FAB TRUSSES @24" O.C.

MARK	STEEL LINTELS
LT-1	3' TO 4' 2- 3-1/2" X 3-1/2" X 1/4"
LT-2	4' TO 7' 2- 4" X 3-1/2" X 5/16"
LT-3	7' TO 9' 2- 5" X 3-1/2" X 5/16"
LT-4	9' TO 10' 2- 5" X 3-1/2" X 3/8"
LT-5	10' TO 12' 2- 6" X 4" X 3/8"
LT-6	W- 8 X 15 W- 1/4" WELED PLATE GARAGE OPENING

WOOD HEADER & POST SCHEDULE						
MARK	SIZE					
WH-I	2'-0" TO 3'-0" = 2-2 X 4 ON EDGE					
WH-2	3'-0" TO 5'-0" = (2) 2 X 6 ON EDGE					
WH-3	5'-0" TO 7'-0" = (2) 2 X 8 ON EDGE					
WH-4	6 X 6 SOLID WOOD BEAM					
WH-5	6 X I 2 SOLID WOOD BEAM					



ELECTRICAL PLAN NOTES

. ALL CONSTRUCTION SHALL CONFORM TO THE 2018 INTERNATIONAL RESIDENTIAL CODE (IRC) AS ADOPTED BY THE CITY OF TUCSON.

2. ELECTRICAL PANELS SHALL BE SQUARE "D", TYPE "QO".

3. MINIMUM WIRE SIZE SHALL BE #12 (CU). ALL BRANCH CIRCUIT WIRE SHALL BE "TW".

4. VERIFY EXACT LOCATION AND REQUIREMENTS OF MECHANICAL EQUIPMENT, THERMOSTAT, AND CONTROL WIRING, SIZE OF EQUIPMENT (HP, AMPS, VOLTAGE, ETC.) PRIOR TO ROUGH-IN AND COMPLY AS REQUIRED.

5. ELECTRICAL CONTRACTOR SHALL DO ALL WIRING NECESSARY AND CONNECT ALL SPECIAL CONTROLS FURNISHED BY THE MECHANICAL CONTRACTOR.

6. FUSES FOR MOTORS SHALL BE TYPE "FRN". FUSES FOR PANEL FEEDERS SHALL BE TYPE "KTN".

7. ALL DISCONNECT SWITCHES FOR MOTORS SHALL BE HP RATED. MOTORS SHALL BE PROTECTED WITH PROPER SIZED FUSETRONS.

8. IF ELECTRICAL CONDUCTORS USED ARE ALUMINUM, TERMINATE AND SPLICE AS RECOMMENDED BY THE MANUFACTURER AND AS FOLLOWS: CLEAN CONDUCTORS WITH A WIRE BRUSH AND APPLY "NO-OXID GRADE A"

SPECIAL SEALING PASTE THOROUGHLY AS SOON AS CONDUCTORS ARE

USE AL/CU TYPE LUGS, CONNECTORS, ETC. WITH FACTORY FILLED CONNECTOR PASTE.

9. THE FOLLOWING ITEMS MAY BE USED WHERE PERMITTED BY CODE:

NON-METALLIC TYPE CABLE NON-METALLIC DEVICE BOXES ALUMINUM CONDUCTORS

10. SMOKE DETECTORS SHALL BE LOCATED PER IRC 2018.

II. VERIFY WITH TELEPHONE AND CABLE COMPANY AS TO CONDUIT AND TRENCHING REQUIREMENTS AND COMPLY AS REQUIRED FOR THE ENTIRE

12. SWITCHES AND RECEPTACLES SHALL BE LEVITON, SLATER OR EQUAL, FLUSH WITH IVORY PLATES OF PROPER GANG AS REQUIRED.

13. ALL FIXTURES TO BE UL APPROVED AND SELECTED BY THE OWNER, FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

14. ELECTRICAL INSTALLATION SHALL COMPLY WITH ALL ELECTRICAL CODES IN EFFECT IN THE AREA AND THE IRC 2018.

15. ELECTRIC SERVICE TO BE UNDERGROUND FROM THE PEDESTAL TO THE RISER PER IRC 2018 INSTALLATION REQUIREMENTS. GROUND PER IRC 2018. BOND PER IRC 2018.

16. ELECTRICAL LOCATIONS SHOWN ARE APPROXIMATE, UNO. ALL LIGHT FIXTURES IN CLOSETS TO BE A MIN 18" FROM SHELVES.

17. CEILING FANS PER IRC 2018.

18. DISCONNECTS AT HVAC EQUIPMENT SHALL NOT BE SUPPORTED BY OR ATTACHED TO HVAC EQUIPMENT.

19. PROVIDE SMOKE DETECTORS PER IRC 2018. LOCATE A MINIMUM 36" FROM MECHANICAL SUPPLY OR RETURN GRILLE. LOCATE AS INDICATED UNO.

20. ALL RECEPTACLES SERVING KITCHEN COUNTERTOP TO BE GFCI PER IRC 2018.

21. LOCATE EXTERIOR OUTLET WITHIN 25 FT. OF ROOF TOP UNIT AS PER IRC 2018

22. ALL BRANCH CIRCUITS THAT SUPPLY 120-VOLT, SINGLE PHASE, 15 AND 20 AMPERE OUTLETS INSTALLED IN FAMILY ROOMS, DINING ROOMS, LIVING ROOMS PARLORS, LIBRARIES, DENS, BEDROOMS, SUN ROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, AND SIMILAR ROOMS OR AREAS SHALL BE PROTECTED PROTECTION OF THE BRANCH CIRCUIT. E3902.12

23. TAMPER RESISTANT RECEPTACLE ARE REQUIRED IN AREAS SPECIFIED IN SECTION E4002.14, EXCEPTIONS ARE MORE THE 5.5 FEET ABOVE THE FLOOR, RECEPTACLES ARE PART OF A LUMINAIRE OR APPLIANCE AND A SINGLE RECEPTACLE FOR A SINGLE APPLIANCE OR A DUPLEX RECEPTACLE FOR TWO APPLIANCES WHERE SUCH RECEPTACLES ARE LOCATED IN SPACES DETICATED FOR THE APPLIANCE SERVED AND, UNDER CONDITIONS OF NORMAL USE THE APPLIANCES ARE NOT EASILY MOVED FROM ONE SPACE TO ANOTHER.

24. A MINIMUM OF 75 PERCENT OF THE LAMPS IN PERMANTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS OR A MINIMUM OF 75 PERCENT OF THE PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL CONTAIN ONLY HIGH EFFICACY LAMPS.

25. FACEPLATE GROUNDING PER SECTION E4001.11.1 AS PER IRC 2018

	PANEL SCHEDULE									
	120/240V SINGLE PHASE 3 W						(200) AMP MAIN			
	CIRCUIT DESCRIPTION		BKR	WIRE	WIRE	BKR	CKT	CIRCUIT DESCRIPTION		
	RANGE		50/	#6	#10	30/	2	WATER HEATER		
	RANGE		/2	CU	CU	/2	4			
	SMOKE DETECTORS		20	#12 CU	#12 CU	20	6	LAUNDRY		
	MASTER BDRM \$ BED #2		15	#14 CU	#12 CU	20	8	KITCHEN APPLIANCE		
	SPARE		20	#12 CU	#12 CU	20	10	KITCHEN APPLIANCE		
	SPARE		20	#12 CU	#12 CU	20	12	BATHROOM RECEPT. GFCI	(NEV	
	LIVING ROOM	13	15	#14 CU	#12 CU	20	14	OUTSIDE RECEPT. (GFCI)		
	SPARE 15		30/	#10	#12 CU	20/	16	A/C UNIT MINI SPLIT]	
			/2	CU	CU #12 CU		18	A/C UNIT MINI SPLIT		
	OUT SIDE LIGHT	19	15	#14 CU	#12 CU	20	20	DISP./DISHWASHER]	
	GENERAL LIGHTING	21	15	#14 CU	#12 CU	20	22	REFRIGERATOR]	
(NEW)	GENERAL LIGHTING	23	15	#14 CU	#12 CU	20	24	MICROWAVE	1	
	GENERAL LIGHTING	25	15	#14 CU		40/	26	A/C UNIT		
	SPARE	27	15	#14 CU	CU	/2	28	/VC ONTI		
	MASTER BEDROOM	29	15	#14 CU	#12 CU	20	30	DINING ROOM		

OUTDOOR LIGHTING CODE CALCULATIONS I. PROJECT LOCATION IN AREA = E3

2. TOTAL SITE AREA = .16 ACRES

3. TOTAL ALLOWABLE LUMENS (SHIELDED) $.16 \times 55,000 = 8,800$ TOTAL ALLOWABLE LUMENS (UNSHIELDED) $.16 \times 12,000 = 1,920$

FIXTURE TYPE QUANTITY LUMENS EA. | SHIELDING | TOTAL LUMENS FI 0 900 UNSHEIDED F2-COMPLIES WITH SEC. 5. I B - FULL CUT OFF LIGHT FIXTURE

LOAD CALCULATIONS W/ADDITION

 $983 \, \text{SQ. FT X 3} = 2949 \, \text{WATTS}$ 2 SMALL APPLIANCE = 3000 WATTS DISP./DISHWASHER = 1200 WATTS = 1500 WATTS WASHER = 1500 WATTS

= 10,149 WATTSIST 10,000 @ 100%

149 X 40% = A/C @ 100%=

8,000 18,060 / 240 = 75 AMPS

ELECTRICAL KEY NOTES

MAIN ELECTRICAL PANEL EXHAUST FAN PER IRC 2018 TABLE M1505.4.4.

EXTERIOR LIGHTS TO BE FULL CUT-OFF STYLE PER CITY OF TUCSON. 6 > (E) EXISTING RECEPTACLE

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